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**A new species of the *Acupalpus* subgenus *Stenolophidius* JEANNEL, 1948 from Papua New Guinea, and redescrptions of *Acupalpus* (*Stenolophidius*) *papua* DARLINGTON, 1968 and *Anthracus furvinus* DARLINGTON, 1968  
(Coleoptera, Carabidae, Harpalini, Stenolophina)**

Bernd JAEGER

**A b s t r a c t :** *Acupalpus* (*Stenolophidius*) *papua* DARLINGTON, 1968 and *Anthracus furvinus* DARLINGTON, 1968 are redescrbed. *Acupalpus* (*Stenolophidius*) *quadrissetosus* nov.sp. is described from Papua New Guinea (type locality: Papua New Guinea: Oro Prov.: Dobodura, ca. 08°45'S, 148°21'E). New distribution data are presented for *Anthracus furvinus* and *Acupalpus papua*.

**K e y w o r d s :** Stenolophina, *Acupalpus*, subgenus *Stenolophidius*, *Anthracus*, redescrptions, new species, Papua New Guinea.

### Introduction

The *Acupalpus* subgenus *Stenolophidius* JEANNEL, 1948 comprises 25 species which are mainly distributed in the Afrotropical and Oriental Regions. Only few species reach the southern limits of the Palaearctic Region, and three species are known from the Australian region. A revision of the Afrotropical species was provided by BASILEWSKY (1951) supplemented by descriptions of BASILEWSKY (1967) and BRUNEAU DE MIRÉ (1990), and the Oriental and East Palaearctic species have been revised recently by JAEGER (2013). The fauna of New Guinea comprises three species of the subgenus which were described or recorded by DARLINGTON (1968) from this island. Two of those, *A. papua* DARLINGTON, 1968 and *A. ustus* sensu DARLINGTON, 1968 (nec ANDREWES) represent closely related southern vicariants of Oriental taxa. The first part of this contribution provides a redescription for the former and a description for the latter species, which actually represents an undescribed species.

The *Anthracus annamensis* group comprises 11 species from the East Palaearctic and Oriental Regions and a number of unrevised species from the Afrotropical region which are still placed in the genus *Acupalpus*. The only known representative from the Australian region, *A. furvinus* was described by DARLINGTON (1968) from Papua New Guinea. This species, which was originally described as a member of the genus *Acupalpus* and subsequently transferred to the genus *Anthracus* by LORENZ (1998), belongs to the *Anthracus furvus* complex, whose East Palaearctic and Oriental members have been

revised recently (JAEGER 2012). The second part of this contribution provides a redescription of *Anthracus furvinus*.

## Material and Methods

Types and material examined are deposited in the following institutions and private collections:

ANIC.....	Australian National Insect Collection, CSIRO Entomology, Canberra, Australia, Dr. A. Slipinski and Ms. C. Leman
BMNH .....	Natural History Museum, London, Great Britain, Ms. Chr. Taylor, Ms. Cl. Gent and Ms. B. Garner
MCZ.....	Museum of Comparative Zoology, Harvard University, Cambridge, USA, Dr. Ph. D. Perkins
RMNH .....	Nationaal Natuurhistorische Museum „Naturalis“, Leiden, The Netherlands, F. van Assen & H. Huijbregts
cBAE.....	Working collection M. Baehr in Zoologische Staatssammlung, München, Germany, Dr. M. Baehr
cJAE.....	Coll. B. Jaeger, Berlin, Germany

Citations of label data, measurements, dissection procedures, preparation of images follow methods described in JAEGER (2009, 2012 and 2013).

## Results

### *Acupalpus (Stenolophidius) papua* DARLINGTON, 1968 (Figs 1-8)

*Acupalpus papua* DARLINGTON, 1968: 75-76 (type locality: Papua New Guinea: Dobodura)

*Anthracus papua* DARLINGTON: LORENZ 1998: 339 [world catalogue], 2005: 360 [world catalogue]

Type material examined: Holotype: 1 ♂ (MCZ) labelled "Dobodura / Papua, N.G. / Mar-July, 1944 / Darlington"; "♂"; "~~det.~~ Darlington / at B.M. 1947-48 / Notes p."; "Mers / ♂" [hw]; "Holotype / Acupalpus / papua D" [hw on red paper]; "M.C.Z. / Holotype / 31392" [red paper, last line hw]; "Camera symbol / Aug-Dec 2006 / MCZ Image / Database". The holotype is in good condition, withouth missing appendages.

Paratypes: 4 ♂♂ (MCZ) labelled "Dobodura / Papua, N.G. / Mar-July, 1944 / Darlington"; "Paratype / Acupalpus / papua / Darl." [red paper] and "M.C.Z. / Paratype / 31392" [red paper, last line hw]. 1 specimen additionally with the label "Drawn 1966 / Mary Catron / no. 243". 1 ♀ (MCZ) labelled "vic Hollandia / Dutch N.G. / July-Sept 1944 / Darlington"; "Mers / ♀" [hw]; "Paratype / Acupalpus / papua / Darl." [red label] and "M.C.Z. / Paratype / 31392" [red paper, last line hw]. 1 ♂ (BMNH) labelled "Para- / type" (circular label with yellow margin); "vic Hollandia / Dutch N.G. / July-Sept 1944 / Darlington"; "Brit. Mus. / 1975-567" [last three letters hw] and "Paratype / Acupalpus / papua / Darl." [red label]. 1 ♂ (MCZ) labelled "Oro Bay / Papua, N.G. / Dec' 43 - Jan' 44 / Darlington"; "Paratype / Acupalpus / papua / Darl." [red label] and "M.C.Z. / Paratype / 31392" [red paper, last line hw].

All types additionally with my label "Acupalpus / (Stenolophidius) / papua / Darlington, 1968 / det. B. Jaeger 2012, 2013 or 2014".

Redescription: General appearance as figured (Fig. 1). Body length 3.6-4.2 mm (holotype 3.6 mm); width 1.6-1.8 mm.

Head dark brown to blackish brown, with clypeus dark brown, labrum and mandibles

dark reddish brown, with inner margin and apices of the latter blackish. Pronotum paler than head, brown to dark brown, with lateral margin and area around hind angles yellowish brown. Elytra brown to dark brown, with apex, lateral margins, and sometimes also first interval indistinctly paler. Antennae with first two antennomeres dark yellowish, remaining ones brown. Palpi and legs paler to darker yellowish. Ventral surface mainly brown to dark brown, but pro- and metasternum often markedly paler reddish brown, and last, or last two abdominal sternites vaguely paler brown. Epipleura brown. Pronotum weakly, elytra clearly iridescent.

Head (Figs 1-3) including eyes 0.79-0.83 times as wide as pronotum, with eyes large and markedly prominent (head 1.69-1.79 times as wide as head between eyes). Labrum, with apical margin weakly emarginate medially, not asymmetric. Left mandible moderately long, faintly obtuse at apex, not thickened or truncate. Antennae comparatively short, 2.50-2.65 times as long as pronotum and 0.80-0.87 times as long as elytra. Microsculpture distinct, on labrum with weakly transverse, on clypeus with almost isodiametric meshes, on frons and vertex with distinct isodiametric meshes becoming moderately transverse in front of pronotal apical margin.

Pronotum (Figs 1-3) 1.42-1.49 times as wide as long, 1.21-1.26 times as wide as head, widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin almost rectilinear, faintly bordered laterally. Anterior angles narrowly rounded at tips, not or only weakly projecting forward. Sides convex in anterior half or two thirds and at posterior half or third rectilinearly converging to base, or very faintly sinuate in front of the latter. Posterior angles distinct and rather sharp at apices. Basal margin between posterior angles about 1.08-1.13 times as wide as apical margin between anterior angles, and 0.80-0.84 times as wide as maximum pronotal width, arcuate medially and oblique to posterior angles, not bordered at sides. Lateral furrows evenly wide in anterior half, becoming markedly widened in posterior half or third where they are fused with baso-lateral impressions. Baso-lateral impressions rather large and deep, clearly separated from the convex pronotal disc and median part of base, flattened to the markedly reflexed basal and lateral margins. Base with rather coarse and close punctation in the lateral impressions, between impressions impunctate or with only few single punctures. Pronotal surface at anterior quarter without punctation. Median line fine and impunctate, disappearing before reaching apical and basal margins. Anterior transverse impression at least suggested. Microsculpture with very lightly impressed strongly transverse meshes on disc, and weakly transverse to almost isodiametric meshes at baso-lateral impressions.

Macropterous. Elytra (Fig. 1) 1.38-1.48 times as long as wide, 3.04-3.16 times as long and 1.46-1.52 times as wide as pronotum. Surface moderately convex. Sides moderately enlarged posteriorly, widest just behind middle, subapical sinuation moderate to distinct. Elytral striae weakly impressed and impunctate, scutellar striole long. Intervals rather flat and wide on disc, becoming somewhat narrowed and weakly convex in front of apex. Basal pore at beginning of scutellar striole present, interval 3 in third quarter with one setiferous pore, adjoining stria 2. Microsculpture on elytral intervals nearly obliterated, only here and there very lightly impressed transverse meshes and line rudiments visible. Scutellum and its nearest surrounding with isodiametric meshes.



**Figs. 1-3:** *Acupalpus (Stenolophidius) papua* DARLINGTON. Habitus, head and pronotum. (1, 3) Paratypes, PNG, Dobodura, (2) Holotype.



**Figs. 4-8:** *Acupalpus (Stenolophidius) papua* DARLINGTON. Median lobe of aedeagus, lateral and dorsal aspect. (4, 7) Paratype, PNG, Hollandia; (5, 6, 8) Paratypes, PNG, Dobodura.

Ventral side: Prosternum medially with 6-8 and in front of anterior margin with 3-4 long erect setae. Metepisterna at inner margin about 1.4 times as long as wide at basal margin. Abdominal sternite 2-3 medially, 4 at medial two quarters and 5-6 entirely with moderate pubescence. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro- and mesotarsomeres 2-4 of males with biserially arranged adhesive hairs on ventral surface.

Aedoeagus (Figs 4-8) medium sized, with lateral sclerotization markedly reduced at medial portion and in some specimens replaced by a reddish swelling or dilatation typical for members of *Stenolophidius*. The internal sac shows the characteristic ground composition of structures for a *Stenolophidius* species (see JAEGER 2013) without significant specific modifications.

**C o m p a r i s o n s :** *A. papua* is closely related to *A. sinuellus* BATES from continental SE Asia and represents probably a southern vicariant of the latter. Both species are rather similar in general appearance, colour and also in aedeagal features, the latter do not provide significant differences. However, though similar *A. papua* differs externally by the pronotal shape which is on average more transverse and has rather acute hind angles usually with sharp tips (in *sinuellus* more obtuse with tips usually narrowly rounded), the shorter elytra (EL/EW 1.38-1.48 in *A. papua* and 1.50-1.62 in *A. sinuellus*) and the microsculpture on head which is rather distinct on frons (instead of obliterated or represented by mesh rudiments in *A. sinuellus*).

From *A. quadrisetosus* nov.sp. which occurs sympatrically at least at Dobodura, *A. papua* differs by its larger size, the darker antennae which leaves only the first or the first two antennomeres yellowish (in *A. quadrisetosus* entirely yellowish), larger and strongly produced eyes, the more transverse pronotum, and the elytra which are longer (EL/PL: in *A. quadrisetosus* 2.85-2.89) and broader (EW/PW: in *A. quadrisetosus* 1.43-1.45) relative to pronotum.

From *A. brunnicolor* (SLOANE) which is not treated here (one syntype deposited in ANIC, has been examined by me), but occurs also in New Guinea, *A. papua* can be easily separated by the different colour and shape of the pronotum (reddish yellow, with widely rounded hind angles in *A. brunnicolor*).

**D i s t r i b u t i o n :** The species is so far known only from Papua New Guinea. In addition to the type material one male from the following locality has been studied:

P a p u a N e w G u i n e a : Madang Province, Baiteta, canopy mission, light AR 27, VII. 1995, Missa (1 - cBAE)

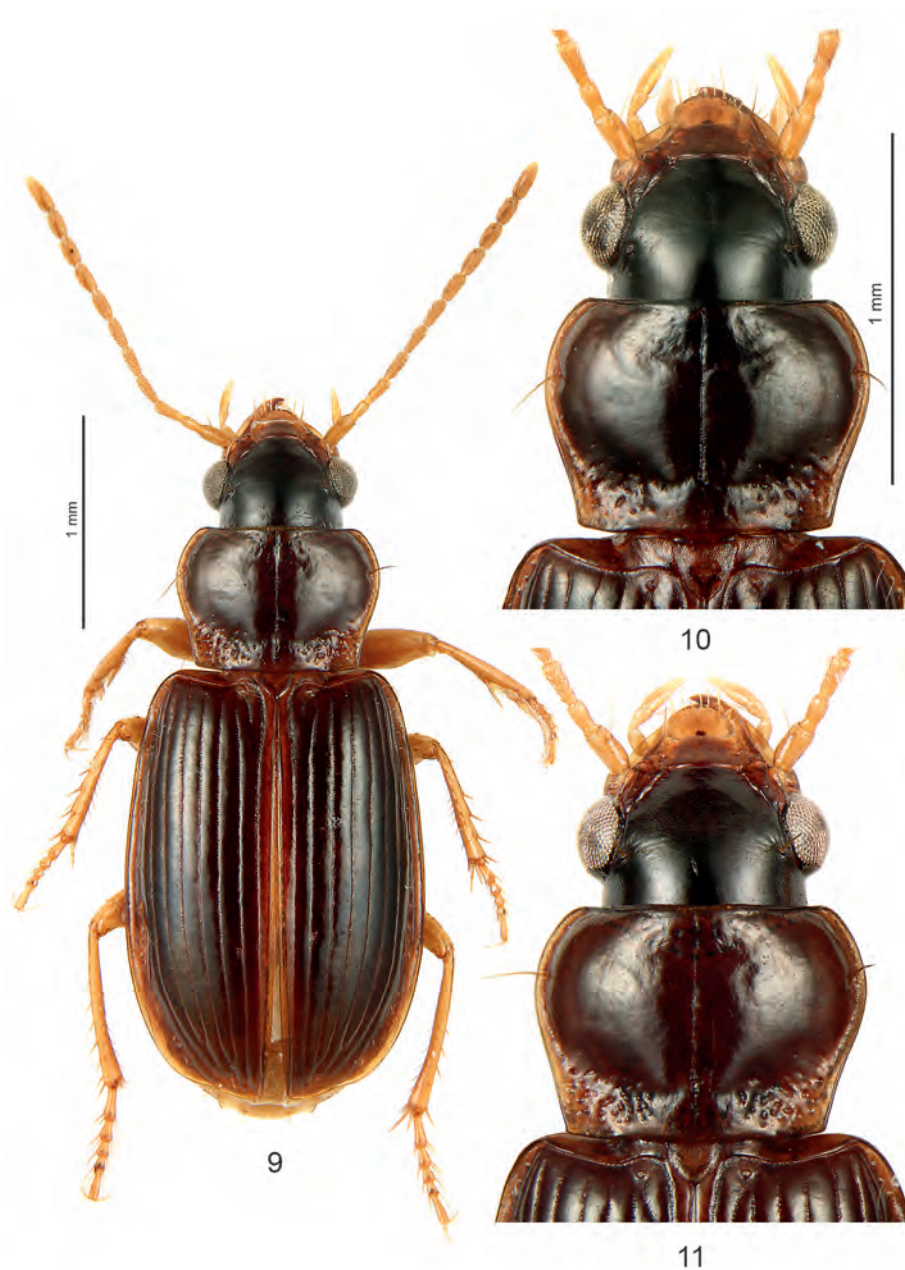
This specimen agrees with the members of the type series in size, colour, microsculpture and general appearance, but differs slightly by the shape of the pronotum which is weakly narrower and longer.

### ***Acupalpus (Stenolophidius) quadrisetosus* nov.sp. (Figs 9-17)**

*Acupalpus ustus* ANDREWES: DARLINGTON 1968: 73, 75 [partim: specimens from Dobodura and Popondetta]

**Type material:** Holotype: ♂ (MCZ) labelled "Dobodura / Papua N.G. / Mar-July, 1944 / Darlington", "♂", "ustus / det. Darlington / at B.M. 1947-48 / Notes p." [first line hw], "Mers ♂" [hw], "Acupalpus / ustus Andr. / det. Darl. '66" and "HOLOTYPE ♂ / Acupalpus / (Stenolophidius) / quadrisetosus sp.n. / des. B. Jaeger 2013". The holotype is in good condition without missing body parts.





**Figs. 9-11:** *Acupalpus (Stenolophidius) quadrisetosus* nov.sp. Habitus, head and pronotum. (9) Holotype, (10, 11) Paratypes, PNG, Dobodura.

**Paratypes:** 9♂♂, 15♀♀ (MCZ, cJAE) labelled "Dobodura / Papua N.G. / Mar-July, 1944 / Darlington" and "Acupalpus / ustus Andr. / det. Darl. '66", 1♂ additionally with "Mers. / ♀". 1♂ (RMNH) with same locality and identification labels, and additionally "Museum Leiden / ex. collection / C.J. Louwerens / rec. 1979" and "Acupalpus / (Stenolophidius) / ustus / Andrewes, 1930 / det. B. Jaeger 2011". 1♂ (BMNH) labelled "Dobodura / Papua N.G. / Mar-July, 1944 / Darlington" and "Acupalpus / ustus Andr. / det. Darl. '66". 1♂ (MCZ) labelled "NEW GUINEA: SE. / Popondetta, 60m / 30-31.VIII. '63" and "J. Sedlacek / Light Trap / BISHOP" and "Acupalpus / ustus Andr. / det. Darl. '69". 1♀ (MCZ) labelled "NEW GUINEA: SE. / Popondetta, 60m / 31.VIII.-2.IX. '63" and "J. Sedlacek / Light Trap / BISHOP" and "Acupalpus / ustus A. / det. Darl. '69".

All paratypes additionally labelled "PARATYPE ♂ or ♀ / Acupalpus / (Stenolophidius) / quadrisetosus sp.n. / des. B. Jaeger 2013".

**Description:** General appearance as figured (Fig. 9). Body length 3.0-3.4 mm (HT 3.3); width 1.3-1.5 mm.

Head blackish brown, with clypeus brown or dark yellowish brown, labrum and mandibles (tips darkened) paler to darker yellowish brown, palpi and antennae yellowish. The latter sometimes with antennomeres 4-11 with a thin longitudinal dark stripe. Pronotum dark brown or blackish brown, often paler than head and elytra, with apical margin and base laterally somewhat paler. Elytra blackish brown, with base, lateral margin and first interval paler reddish brown. Legs yellowish brown. Ventral surface mainly brown to dark yellowish brown, with head and proepisterna often darker brown. Pronotum weakly, elytra markedly iridescent.

Head (Figs 9-11) including eyes, moderately wide, 0.75-0.80 times as wide as pronotum, with eyes moderately prominent (head 1.49-1.61 times as wide as head between eyes). Left mandible sharp to somewhat obtuse at apex, not thickened or truncate. Labrum at apical margin rounded, not asymmetric. Antennae rather short 2.33-2.50 times as long as pronotum and 0.81-0.86 times as long as elytra. Microsculpture on labrum with isodiametric, on clypeus with isodiametric to moderately transverse meshes, on frons with isodiametric meshes becoming somewhat transverse laterad, and on vertex posterior to eyes with faint and strongly transverse meshes.

Pronotum (Figs 9-11) 1.34-1.41 times as wide as long, 1.26-1.33 times as wide as head, widest in second quarter, lateral seta inserted somewhat posterior to beginning of second quarter. Apical margin weakly to moderately emarginate, faintly bordered laterally. Anterior angles narrowly rounded at tips, weakly to moderately projecting forward. Sides convex in anterior two thirds, rectilinearly converging at posterior third, not or very faintly sinuate in front of pronotal base. Posterior angles distinct and sharp. Basal margin between posterior angles slightly wider as apical margin between anterior angles, and 0.78-0.81 times as wide as maximum pronotal width, weakly arcuate medially and almost straight or slightly oblique to posterior angles, not bordered at sides. Lateral furrows narrow, becoming widened and confluent with baso-lateral impression at basal half or third. Baso-lateral impressions rather large and deep, clearly delimited from the convex pronotal disc and the somewhat depressed middle portion of base, flattened to basal and lateral margin, which are weakly reflexed. Base with rather coarse, but not very close punctation in the baso-lateral impressions, sometimes extending somewhat forward along sides, between impressions impunctate or with few small punctures. Surface otherwise impunctate. Median line very fine, impunctate, disappearing before reaching apical and basal margins. Anterior transverse impression obsolete or only suggested. Microsculpture strongly obliterated, only here and there traces of fine transverse lines are visible, which are more distinct at baso-lateral impressions.





**Figs. 12-17:** *Acupalpus (Stenolophidius) quadrisetosus* nov.sp. Median lobe of aedoeagus lateral and dorsal aspect. (12) Holotype; (13-17) Paratypes, Dobodura.

Macropterous. Elytra (Fig 9) 1.38-1.44 times as long as wide, 2.80-2.95 times as long and 1.43-1.51 times as wide as pronotum. Sides weakly to moderately widened posteriorly, widest behind middle, subapical sinuation moderate. Elytral striae weakly impressed and impunctate, scutellar striae long. Intervals rather flat and wide on disc, becoming narrowed and weakly convex in front of apex. Basal pore at beginning of scutellar striae present, interval 3 in third quarter with one setiferous pore, adjoining stria 2. Microsculpture on elytral intervals only with indistinct traces of transverse lines, scutellum with almost isodiametric meshes.

Ventral side: Prosternum medially with six longer erect setae. Metepisterna comparatively short, though distinctly narrowed posteriorly, at inner margin about 1.3 times longer as wide at basal margin. Abdominal sternite 4-6 usually moderately pubescent, in sternite 4 pubescence lacking laterally. Last visible sternite in males and females with four longer setae at apical margin.

Legs: Protarsomeres 2-4 and mesotarsomeres 3-4 of males with biserially arranged adhesive hairs on ventral surface.

Aedoeagus (Figs 12-17): Comparatively small, with typical reduced lateral sclerotization which is replaced by a reddish swelling or dilatation in some specimens. Internal sac with no significant specific structures.

**Comparisons and remarks:** *A. quadrisetosus* nov.sp. was reported as *A. ustus* ANDREWES from Papua New Guinea (specimens from Dobodura and Popondetta) by DARLINGTON (1968: 75) who noted "My identification is tentative, although based on comparison of specimens with the type." *A. quadrisetosus* is in general appearance actually rather similar to *A. ustus* ANDREWES from Sumatra and Kalimantan and represents obviously a closely related southern vicariant of the latter. It differs from *A. ustus* by the generally darker body with head blackish instead of reddish or brown, pronotum dark brown instead of reddish or pale brown and elytra blackish brown instead of reddish to dark brown, the microsculpture on frons of head which is much more distinct (very lightly impressed and partly obliterated in *A. ustus*), the eyes which are weakly smaller (HW/HWbE in *A. quadrisetosus* mostly  $< 1.60$  in *A. ustus*  $> 1.58$ ), the pronotum which is broader relative to head (PW/HW  $> 1.25$ , in *A. ustus*  $< 1.26$ ), the elytra which are broader and shorter (EL/EW  $< 1.45$ , in *A. ustus*  $> 1.43$ ), and the chaetotaxy of the anal sternite, which is at apical margin quadrisetose in males of *A. quadrisetosus* instead of bisetose in males *A. ustus*. However, the latter character needs verification because it might be that in the two old paratype male specimens of *A. ustus* the outer two setae were broken, though I was not able to detect any insertion pore. The median lobe of the aedoeagus is rather similar in both taxa but in *A. quadrisetosus* it is more clearly curved ventrad.

From *A. brunnicolor* and *A. papua* which also occur in New Guinea, the latter species even sympatrically at Dobodura, *A. quadrisetosus* differs by its smaller size, the colour of antennae with antennomeres 3-11 not darkened, the shape of the pronotum with sides almost rectilinearly narrowed to the sharp posterior angles, and the smaller and less produced eyes.

It should be remarked that the single specimen from "vic. Hollandia" which DARLINGTON (1968) reported also as *A. ustus* does not belong to the new species described here. It represents probably an undescribed species close to *A. papua* DARLINGTON.

**Distribution:** *A. quadrisetosus* nov.sp. is so far known only from Papua New Guinea.

***Anthracus furvinus* DARLINGTON, 1968 (Figs 18-20)**

*Acupalpus furvinus* DARLINGTON, 1968: 74 (type locality: Papua New Guinea: Dobodura)

*Anthracus furvinus* DARLINGTON: Lorenz 1998: 339 [world catalogue], 2005: 360 [world catalogue]

Examined type material: Holotype: 1♂ (MCZ) labelled "Dobodura / Papua, N.G. / Mar-Jul, 1944 / Darlington"; "not furvus / det. Darlington / at B. M. 1947-48 / Notes p. 32"; [first line and "32" in last line hw], "Mers/ ♂" [hw], "♂"; "Holotype / Acupalpus / furvinus D" [hw on red label]; "M.C.Z. / Holotype / 31391" [red label, last line hw] and "pictogram of camera / Caribbean / Database / 2005".

Paratypes: 1♂, 4♀ (MCZ) labelled "Dobodura / Papua, N.G. / Mar-Jul, 1944 / Darlington"; "Paratype / Acupalpus / furvinus / Darl." [red label] and "M.C.Z. / Paratype / 31,391" [red label, last line hw], the male additionally with a label "♂", and one female additionally with "Mers / ♀" and one female with "K 27/1962". 1♀ (BMNH) labelled "Para- /type" [circular label with yellow margin]; "Dobodura / Papua, N.G. / Mar-Jul, 1944 / Darlington"; "Paratype / Acupalpus / furvinus / Darl." [red label] and "Brit. Mus. / 1975-567". 1♀ (MCZ) labelled "Aitape / Brit. N.G. / Aug 1944 / Darlington" and "Paratype / Acupalpus / furvinus / Darl." [red label] and "M.C.Z. / Paratype / 31,391" [red label, last line hw].

All mentioned types additionally with my label "Anthracus / furvinus / (Darlington, 1968) / det. B. Jaeger 2012, 2013 or 2014".

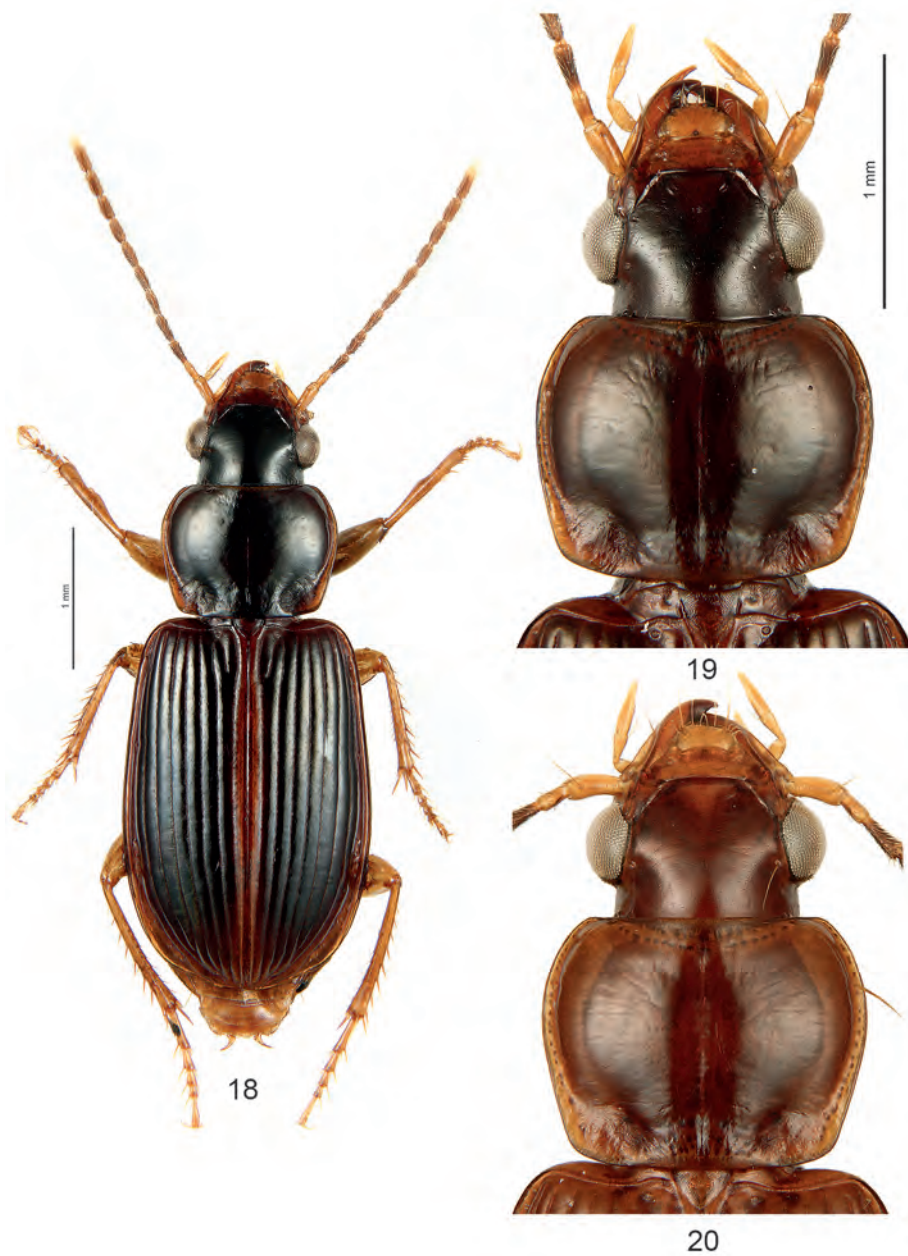
The paratype specimen from Lake Daviumbu mentioned in the description has not been studied.

**Redescription**: General appearance as figured (Fig. 18). Body length 3.5-4.6 mm (HT 4.6 mm); width 1.5-1.8 mm.

Head dark brown, blackish brown or almost black, without dark reddish spots posterior to eyes. Clypeus reddish to dark reddish, labrum and mandibles (inner margins and apices blackish) paler reddish. Pronotum dark brown to blackish brown, often slightly paler than head, with lateral margins, sometimes also middle part of base, apical margin and hind angles vaguely paler brownish. Elytra dark to blackish brown, leaving base, lateral margin and the first interval reddish brown. Legs and palpi dark yellowish brown, antennae brown, with first two antennomeres paler. Ventral surface mainly dark brown, with prosternum, metasternum, and sometimes also abdominal sternites somewhat paler. Upper surface shiny, pronotum weakly, elytra moderately iridescent.

Head (Figs 18-20) including eyes 0.71-0.79 times as wide as pronotum, with eyes moderately prominent (head 1.53-1.60 times as wide as head between eyes). Labrum almost rectilinear or weakly rounded at apical margin. Mandibles medium sized, not distinctly prolonged and curved, left mandible faintly obtuse at apex, not thickened or truncate. Antennae 2.25-2.40 times as long as pronotum and 0.84-0.87 times as long as elytra. Microsculpture on labrum almost isodiametric or weakly transverse, on clypeus weakly transverse, on anterior half of head either partly obliterated or with lightly impressed isodiametric meshes, or with moderately impressed isodiametric meshes, on posterior half with more clearly impressed isodiametric meshes, becoming weakly to moderately transverse in front of pronotal anterior margin.

Pronotum (Figs 18-20) 1.25-1.36 times as wide as long, 1.26-1.38 times as wide as head, widest in second quarter, lateral seta inserted at or a little posterior to beginning of second quarter. Apical margin almost rectilinear or weakly emarginate, lateral border reaching medial third. Anterior angles narrowly rounded at tips, weakly projecting forward. Sides convex in anterior half, rectilinearly narrowed to posterior angles, which



**Figs. 18-20:** *Anthracus furvinus* (DARLINGTON). Habitus, head and pronotum. (18, 20) Paratypes, PNG, Dobodura, (19) Holotype.

are more or less widely rounded. Basal margin weakly arcuate medially, oblique to posterior angles. Lateral furrows evenly narrow in apical half or apical two thirds, becoming markedly widened at posterior third, where they are fused with the baso-lateral impressions. Baso-lateral impressions medium sized, clearly delimited from pronotal disc and median part of base, fused with basal and lateral margin. Basal impressions and other surface of pronotum impunctate. Median line fine, disappearing before reaching basal and apical margins. Anterior transverse impression obliterated. Microsculpture with very faintly impressed rudimentary lines and strongly transverse meshes on disc, at baso-lateral impressions and lateral furrows with distinctly impressed isodiametric to weakly transverse meshes.

Macropterous. Elytra (Fig. 18) with sides weakly to moderately widened posteriorly, widest just posterior to middle, 1.48-1.54 times as long as wide, 2.60-2.82 times as long and 1.34-1.45 times as wide as pronotum. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals weakly convex on disc, becoming narrowed and moderately convex at apex. Basal pore at beginning of scutellar striole present, interval 3 in third quarter with one setiferous pore, adjoining stria 2. Microsculpture on scutellum almost isodiametric, on elytral intervals almost obsolete, only here and there traces of very lightly impressed transverse lines visible.

Metepisterna at inner margin about 1.4 times longer than wide at basal margin. Prosternum medially with 6-9, and in front of apical margin with 4-8 longer setae. Prosternal process posteriorly with 3-5 long and distinct setae. Abdominal sternites 4-6 with distinct and dense pubescence, in sternite 4 often reduced laterally. Last visible abdominal sternite of males moderately emarginate and that of females almost rectilinear or very faintly convex at apex, at apical margin with two longer setae in males and four in females.

Protarsomeres 1-4 of males markedly dilated and with distinct, biserially arranged adhesive hairs on ventral surface. Protarsomere 4 markedly bilobed. Mesotarsomeres 1-4 of males moderately dilated and with adhesive hairs on ventral surface, mesotarsomere 4 moderately bilobed. In females pro- and mesotarsomeres unmodified. Male profemora somewhat thickened in relation to females and with a row of closely arranged long and fine setae at upper inner margin.

Median lobe of aedeagus (Figs 21-23) with general appearance and structures of internal sac as figured. Apex in dorsal aspect markedly widened and asymmetric. Internal sac (dorsal aspect) composed of two large apical teeth, and a row of 10-12 medium sized teeth medially.

**Notes on variation:** The type specimens from Dobodura and Aitape, as well as the non-type specimens from Sepen show a considerable variation in size, pronotal shape and microsculpture. It might be that all differences fall in the normal range of variation of *Anthracus furvinus*. However more material, including males, particularly from Aitape and Sepen, are needed to clarify the individual variation of *A. furvinus* and to ensure that no similar species occurs in these localities.

**Comparisons:** *A. furvinus* belongs to the *Anthracus annamensis* group due to its quadrisetose ligula and other characters. Within this species group it has closer relations to the taxa related to *A. furvus* ANDREWES which were recently revised (JAEGER 2012). These species occur further north in continental SE Asia, India and Sri Lanka, and one occurs at the Sunda Islands of Java and Bali. *A. furvinus* can be easily separated from all



**Figs. 21-23:** *Anthracus furvinus* (DARLINGTON). Median lobe of aedeagus, dorsal and lateral aspect. (21) Holotype; (22, 23) Paratype, PNG, Dobodura.

these species by the peculiar chaetotaxy of the profemora with a row of closely arranged long setae at upper inner margin, and by the different shape of the median lobe of the aedeagus with its characteristic asymmetric apex and the particular structures of the internal sac (figs 21-23). Externally, *A. furvinus* is rather similar to *A. furvus* and *A. wrasei*. It differs from both species by the less distinct and much finer microsculpture on



disc of the pronotum, the almost obsolete microsculpture on elytral intervals (meshes fine and strongly transverse, but fully developed in *A. furvus* and *A. wrasei*) and the shorter respectively broader elytra (EL/EW: *A. furvinus* < 1.55, *A. furvus* > 1.54, *A. wrasei* > 1.61). From *A. wrasei* it differs also by the different colour of head without reddish spots behind eyes, and the ratio of elytra/pronotum length (EL/PL: *furvinus* < 2.81, *wrasei* > 2.88). From *A. glabrus* LOUWERENS which has the southernmost distribution of the Oriental members of the *A. furvus* complex, *A. furvinus* can be separated externally by the ratio of elytra/pronotum length (EL/PL: *A. furvinus* < 2.81, *A. glabrus* > 2.92) and the different microsculpture on pronotal surface (with more distinct and rough meshes in *A. glabrus*).

**Distribution:** *A. furvinus* is so far known only from Papua New Guinea. The records from Aitape (about 900 km W of Dobodura) based on a very small atypical female and those from Sepen (about 600 km NW of Dobodura) based on two females should be confirmed by males. In addition to the types two females from the following locality have been examined:

Papua New Guinea: Madang Province: Sepen vill n°2, IV. 1988, Van Stalle (2 - cBAE).

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### Zusammenfassung

*Acupalpus* (*Stenolophidius*) *quadrisetosus* nov.sp. wird neu beschrieben (Locus typicus: Papua New Guinea. Dobodura, ca. ca. 08°45'S, 148°21'E). Redeskriptionen werden für *Acupalpus* (*Stenolophidius*) *papua* DARLINGTON 1968 und *Anthracus furvinus* (DARLINGTON 1968) vorgelegt. Für beide Arten werden neue Nachweise vorgestellt.

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Anschrift des Verfassers: Bernd JAEGER  
Zingster Str. 40  
D-13051 Berlin, Germany  
E-Mail: acupalpus.bj@gmx.de